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8. (Twice Amended) The DNA sequence of SEQ ID NO: [1 and] 2

altered by point mutations, deletions or insertions such that the resulting amino acid sequence is shortened.

✓ Claim 9, line 1, please delete "1 or".

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15. (Twice Amended) A method of combinatorial genetics using the

TA genes as set forth in SEQ ID NOS 1-19 for use in combinatorial genetics.

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16. (Twice Amended) A method of encoding for the synthesis,

modification or regulation of antibiotic TA by using a TA gene as set forth in SEQ ID NOS 1-19 for encoding for the synthesis, modification or regulation of antibiotic TA.

REMARKS

Claims 1-16 are currently pending in the application. Claims 1, 3, 5, 7, 8, 9, 11 and 16 are in independent form.

The Office Action states that the Information Disclosure Statement filed on February 15, 2000 fails to comply with 37 CFR 1.198(a)(2), which requires a legible copy of each U.S. and foreign patent and each publication which is listed. Copies of the missing references are attached hereto.

Claims 1-6 stand rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the invention was filed, had possession of the claimed invention.

The Office Action states that the instant claims are directed to DNA sequences encoding or partially encoding polypeptides for the synthesis, post-modification, and/or regulation of the antibiotic TA where the claimed products are defined by their functional characteristics. However, the Office Action holds that in claims to genetic material a generic statement such as "vertebrate insulin cDNA" without more is not an adequate written description of the genus since it does not distinguish the genus from others, except by function. The Office Action concludes that one skilled in the art cannot visualize or recognize the identity of the members of the genus. However, the claims as pending do state that there must be present a specific polypeptide which is utilized in the synthesis of antibiotic TA. This statement does sufficiently describe a structural feature commonly possessed by members of the genus such that the members of the genus must include therein at least one polypeptide which is utilized in the synthesis, post-modification or regulation of the antibiotic TA. Accordingly, reconsideration of the rejection is respectfully requested.

DRAFT - 09/240,537

Claims 7-9 and 10-14, stand rejected under 35 U.S.C. Section 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Specifically, the Office Action states that in the claims the sequence numbers are referred to as DNA sequences, while in the Sequence Listing they are referred to as amino acid sequences. This was an error found in the Sequence Listing, which error has been remedied with the attached Sequence Listing. This correction thus obviates the present rejection.

The Office Action states that claims 15 and 16 are rejected under 35 U.S.C. Section 101 because the claimed recitation of a use, without setting forth any further steps involved in the process, results in an improper definition of a process. Accordingly, both claims 15 and 16 have been amended to either recite a proper method claim or the language has been amended to no longer recite a method claim. Reconsideration of the rejection is respectfully requested.

Claims 1-2 stand rejected under 35 U.S.C. Section 102(b) as being anticipated by general scientific knowledge. The Office Action states that in claim 1, line 1, the claim to "DNA sequences partially encoding... polypeptides" without defining the term "partially" claims fragments as small as three nucleotides, or a single code, encoding one amino acid would be included in the claim. Furthermore, the Office Action states that the nucleotide database of GenBank

contains greater than 100 nucleotide sequences from the cited species at the time the invention was made, all of which anticipate claims 1-2. However, when read more specifically, none of the published sequences were required for the biosynthesis or post-modification of antibiotic TA. Additionally, there were no cited references teaching the claimed sequences. As a matter of law, there must be a reference cited which teaches subject matter even if the subject matter is held to be in the general knowledge. That is, any holding of a limitation being in the general knowledge must be supported by a citation. Since the prior art does not disclose any sequences for the biosynthesis or post-modification of antibiotic TA as recited in pending claims 1 and 2, the claims are not anticipated by the cited general scientific knowledge and reconsideration of the rejection is respectfully requested.

Claim 8 stands rejected under 35 U.S.C. Section 102(b), as being anticipated by general scientific knowledge. The Office Action cites that in claim 8, line 2, the claim recites DNA sequences resulting in truncated amino acid sequences. The Office Action states that without any further limitation of the term "truncated", this claim language broadly encompasses DNA fragments as small as three nucleotides, or a single code on which sequences are found throughout scientific literature. Claim 8 has been amended in order to further prosecution, to remove the term "truncated". Additionally, when read more specifically, none of the published sequences were required for the biosynthesis or post-modification

of antibiotic TA. As this requirement is recited in the claim language of pending claims 1 and 2, these claims are not anticipated by the cited general scientific knowledge. Reconsideration of the rejection is respectfully requested.

It is respectfully requested that the present amendment be entered in order to place the application in condition for allowance or at least in better condition for appeal. The application is placed in condition for allowance as it addresses and resolves each and every issue that remains pending. The amendments overcoming the rejections under 35 USC 112 are made exactly as suggested by the Office Action. Claims have also been amended to clearly distinguish over the prior art. The application is made at least in better condition for appeal as the amendment removes many issues thereby simplifying the issues on appeal. That is, each and every rejection under 35 USC 112 has been overcome exactly as suggest in the Office Action. Further, the claims have been amended to more specifically define the invention while raising no new issues which would require any further searching. Rather, the amendments have been made in view of comments made in the Office Action which clearly distinguish the presently pending claims over the cited prior art. Hence, it is respectfully requested that the amendment be entered.

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In conclusion, it is respectfully requested that the present amendment be entered in order to place the application in condition for allowance, which allowance is respectfully requested.

The Commissioner is authorized to charge any fee or credit any overpayment in connection with this communication to our Deposit Account No. 11-1449.

Respectfully submitted,

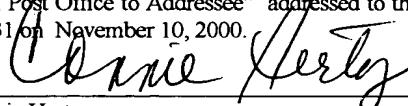
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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231 on November 10, 2000.


Connie Herty